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Awareness of Medical Students about the Difference between Schizophrenia and Bipolar Disorder in Saudi Arabia

Khalil Mohamed[1*], Hattan Alkhuzaie[2], Fadil Barnawi[3], Abdulaziz Alzahrani[4], Hassan Almaliki[5], Fahad Alotabi[6], Abdallah Alhazmi[7], Mohammad Shah[8] and Mohand Nabag[9]

[1-9]Department of Epidemiology and Medical Statistics, Faculty of Public Health & Health Informatics, Umm Al-Qura University, Saudi Arabia

*Corresponding author: Khalil Mohamed (kmismail@uqu.edu.sa).

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Abstract **Background:** Mental disorders are diseases that affect cognition, emotion and behavioral control. They significantly affect adults' ability to function in their families, at work and in society as well as children's ability to learn. The aim of this study is to explore awareness of the students of Faculty of public health and health information about bipolar disorder and schizophrenia and the difference between them. **Methods:** This cross section analytic study was performed on August 28th, 2023, to June 4th, 2024. The survey included demographic characteristics, schizophrenia and bipolar disorder awareness and the difference between them based on Likert scale. **Results:** Of 306 participants in the knowledge section there was (40.85%) who had the highest awareness in the schizophrenia definition and (38.56%) had high awareness that mental disorder has resulted in schizophrenia and bipolar disorder. In the attitude and beliefs section there was (30.72 %) who believed in patient with schizophrenia are more likely to have aggressive behavior and (20.92%) believed that bipolar disorder patients lack jobs opportunities. There is also (40.52%) who do not feel ashamed that one of their family members has bipolar disorder. **Conclusion:** The students had high awareness in knowledge section and they were able to differentiate between the two disorders in most aspects, but they were undecided in the attitudes and beliefs section.

Key Words Schizophrenia, Bipolar disorder, Mental disorders, Awareness, Knowledge, Attitude

INTRODUCTION

Mental disorders are diseases that affect cognition, emotion and behavioural control. They significantly affect adults' ability to function in their families, at work and in society as well as children's ability to learn [1]. Middle Eastern psychiatrists are used to seeing patients with psychiatric issues show up late for appointments, often because of family pressure [2]. Neurotic means you're afflicted by neurosis; it's described mental, emotional or physical reactions that are drastic and irrational [3]. As psychotic disorders are among the most severely disabling of all mental health conditions, they involve serious disruptions of perception and thought process that show up as symptoms of hallucination, delusion, disorganized thoughts, flat affect and inability to think abstractly [4]. While delusional disorders more frequently manifest in middle age, the most common psychotic disorders, including schizophrenia, bipolar disorder and depression with psychotic symptoms, begin in the late second or third decade of life [5]. Psychosis is one of the most significant mental disorders within the group of psychotic disorders. Psychosis is a symptom of several mental health disorders, including psychotic disorders [6]. There are many risk factors for psychosis. Childhood trauma, social exclusion, racial discrimination based on skin colour and minority status are some of these factors, according to several studies [7]. Psychosis is a common feature to many psychiatric, neuropsychiatric, neurologic, neurodevelopmental and medical conditions. It serves as schizophrenia's defining characteristic [8]. Schizophrenia is a severe psychiatric disorder that has a significant effect on both the individual and society. More than half of those who receive a diagnosis have intermittent but long-term psychological issues and about 20% have chronic symptoms and disability, implying that the outcomes may not be as uniformly negative as is frequently assumed. Life expectancy has been reduced by 10–20 years and unemployment is at an alarmingly high rate of 80–90% [9]. The symptoms are positive symptoms, negative symptoms

cognitive symptoms. Hallucinations, delusions, thought withdrawal and behavioural changes are examples of positive symptoms. Negative symptoms include anhedonia, poverty speech and diminished social drive [10] and cognitive symptoms are perception, reasoning and remembering [11]. Every year, one in 10,000 adults (12 to 60 years old) develops schizophrenia. Based on a narrow and specific description of the diagnosis, standardized assessment techniques and large, representative populations, the incidence rates appear consistent across time and across cultures, at least for the past 50 years [12]. Although the causes of schizophrenia are unclear genetic and epidemiological research has shown a number of genetic and environmental risk factors [13]. Paranoid schizophrenia, hebephrenic schizophrenia, catatonic schizophrenia, undifferentiated schizophrenia, post-schizophrenic depression and simple schizophrenia are all types of schizophrenia [14], more of the following symptoms must be present for a significant portion of time during a one-month period: Delusions, Hallucinations, Disorganized speech, disorganized or catatonic behaviour and negative symptoms [14]. The second important psychotic disorder is bipolar disorder and it is characterized by recurrent episodes of elevated mood and depression, which are accompanied by changes in activity or energy and associated with characteristic cognitive, physical and behavioural symptoms [15]. Bipolar disorder symptoms are classified as mood symptoms, behavioural symptoms and cognitive symptoms [16]. it is a major cause of disability in young people, resulting in cognitive and functional impairment as well as increased mortality and, particularly suicide [17]. Bipolar disorder is classified into for types, bipolar disorder 1 (BD-1), bipolar disorder 2 (BD-2), cyclothymic disorder and unspecified bipolar disorder [18]. Bipolar disorder types I and II are very difficult to accurately diagnose in clinical practice, especially in their early stages. Only 20% of patients with bipolar disorder who are experiencing a depressive episode are diagnosed within the first year of seeking treatment, with a mean delay of 5-10 years between illness onset and diagnosis [19]. Schizophrenia and bipolar disorder are both mental disorders with a chronic and deteriorating course that imposes a significant burden not only on patients but also on society and health systems. Schizophrenia and bipolar disorder are complex neuropsychiatric disorders with clinical manifestations, alterations to brain structure and function, genetic features, neurobiological pathways and oligodendroglial dysfunction [20]. On the basis of the clinical course, Kraepelin differentiated schizophrenia and bipolar disorder as two forms of psychoses. He also noted that both disorders shared specific symptoms, such as hallucinations, delusions and mood symptoms [21]. Despite the overlap between schizophrenia and bipolar disorder, it was sometimes difficult to discern between the two using only phenomenological features [21]. The mechanisms underlying the link between premorbid impairments and schizophrenia and bipolar disorder are most likely a combination of the following: (1) common aetiologies (genetic and/or environmental), (2) cognitive mechanisms whereby cognitive difficulties drive social difficulties in adjustment to the environment and reality testing (conversely, good cognitive abilities could protect from developing psychosis in genetically/environmentally high-risk individuals), (3) premorbid abnormalities and cognitive impairment may be independent risk factors for psychosis, (4) reverse causality (premorbid abnormalities are early symptoms of pathology) and/or residual confounding (parental education and socioeconomic class are common underlying factors for both premorbid conditions and diagnoses) [22]. Due to the importance of knowledge of schizophrenia and bipolar among the population, especially for students of the Faculty of Public Health and Health Informatics. This study conducted to assess the background baseline knowledge and awareness of schizophrenia and bipolar and the difference between them.

METHODS

Study Design

Data for this study were obtained using cross sectional analytic study. In addition, the sample type is simple random sampling.

Sample Population

This study included both male and female students at College of Public Health and Health Information at Umm Al-Qura University, Makkah.

Sample Size

The number of students that participated in this study is 305-sample size as calculated by sample size calculator in calculator.net website, considering confidence interval as 95% and level of significance as 5% and population approximately 1434 student.

Study Period

From August 28th, 2022, to June 4th, 2023

Ethical Approval Considerations

The ethical approval was obtained from bioethical committee of Umm Al-Qura University, Makkah city.

Data Collection

An online self-administrated questionnaire survey about schizophrenia, bipolar disorder and common factors. designed by google forms is a free survey tool written in Arabic language the questionnaire form divided into 2 different parts, each part will contain group of questions formed in 5 points questions (strongly agree, agree, undecided, disagree, strongly disagree) based on Likert scale. The questionnaire form divided into 2 different parts, the first part contains 3 questions of the demographic data of students which the second part contain a group of questions that will concentrate on assessing to 20 questions on knowledge and 10 questions on attitude of schizophrenia, bipolar disorder and common factors.

Data Analysis

Data that collected from the questionnaire was documented and analysed by using ipad version of Microsoft Excel 2.73.

RESULTS

Sociodemographic Characteristics

A total of 306 participants responded to the questionnaire. The sociodemographic characteristics are presented in Table 1. More than half of study respondents were males with (59.8%) while females were (40.2%). Among the majors of the Faculty of Public Health, the most responses came from the preparatory with (25.2%) followed by health promotion with (23.5%), Epidemiology (18.6%). For the academic year, the fourth year constitutes the most response rate with (39.2%) (Table 1).

Awareness Based on Knowledge

Table 2 displays large number of positive answers the highest percentage on questions 2,3 and 18. Question 2 had the highest awareness were in the schizophrenia definition with (40.85%), the mean is (4.193) and the standard deviation is (0.881). Question 18 had the second highest awareness about mood swings is a symptom of bipolar disorder with (38.89%), the mean is (4.197) and the standard deviation is (0.698). Question 3 had the third highest awareness occurred in schizophrenia and bipolar disorder are results of mental disorder with the (38.56%), the mean is (4.190) and the standard deviation is (0.729). The least awareness was in the question 11,13 and 16. In question 11 participants had the least awareness about the personal weakness are one of the causes of schizophrenia and bipolar disorder with (16.34%) the mean was (3.361) and the standard deviation are (1.304). Also question 13 was (16.34%) low awareness in treatment of schizophrenia done only in mental hospital. Questions 16 the second least awareness in disorganized speech it was (19.61%) the mean (3.630) the standard deviation (1.017). also found two undecided answers to question 6 and 17 As most responses tend towards neutrality (Table 2).

Attitudes and Beliefs

Table 3 displays number of positive answers the highest percentage on questions 1,10 and 11. Question 1 (30.72 %) that believed in patient with schizophrenia more likely to have aggressive behavioural, the mean is (3.938) and the standard deviation is (0.927). Question 10 (20.92%) believed that bipolar disorder patients lack jobs opportunities, the mean is (3.662) and the standard deviation is (1.040). Question 11 (22.22 %) believed that patients with schizophrenia has irregular behaviour in work environment, the mean is (3.803) and the standard deviation is (0.862). We found that the question 6 has strong opposition (40.52%), as they do not feel ashamed that one of their family members has bipolar disorder, the mean was (2.289) and the standard deviation is (1.877). Questions 8 and 9 had low agreement percentage where question 8 people with bipolar disorder difficulty have forming a social relationship with (18.63%) the mean (3.699) and the standard deviation is (0.847). question 9 the participants didn't mind dealing with schizophrenia and bipolar patients with (18.30%) the mean (3.407) and the standard deviation is (1.275). And we noticed that there are many people who are neutral in their opinions about their beliefs (Table 3).

Table 1: Sociodemographic characteristics

Characteristics	Number	Percentage
1- Gender		
Male	183	59.80
Female	123	40.20
2- Specialization		
Preparatory	77	25.20
Epidemiology	57	18.60
Health promotion	72	23.50
Environmental health	38	12.40
Health information management	62	20.30
3- Academic year		
First	77	25.20
Second	37	12.10
Third	72	23.50
Fourth	120	39.20

Table 2: student's knowledge about schizophrenia and bipolar disorder

No.	Strongly agree	Agree	Undecided	Disagree	Strongly disagree	Mean	Standard deviation	Degree
1	95 (31.05%)	137 (44.77%)	49 (16.01%)	17 (5.56%)	8 (2.61%)	3.974	0.881	Agree
2	125 (40.85%)	133 (43.46%)	31 (10.13%)	12 (3.92%)	5 (1.63%)	4.193	0.729	Agree
3	118 (38.56%)	138 (45.10%)	38 (12.42%)	10 (3.27%)	2 (0.65%)	4.190	0.615	Agree
4	62 (20.26%)	111 (36.27%)	82 (26.80%)	39 (12.75%)	12 (3.92%)	3.574	1.107	Agree
5	100 (32.68%)	128 (41.83%)	55 (17.97%)	19 (6.21%)	4 (1.31%)	3.997	0.826	Agree
6	52 (16.99%)	100 (32.68%)	88 (28.76%)	52 (16.99%)	14 (4.58%)	3.416	1.165	Undecided
7	93 (30.39%)	135 (44.12%)	59 (19.28%)	15 (4.90%)	4 (1.31%)	3.987	0.763	Agree
8	104 (33.99%)	104 (33.99%)	57 (18.63%)	29 (9.48%)	12 (3.92%)	3.859	1.194	Agree
9	103 (33.66%)	122 (39.87%)	50 (16.34%)	22 (7.19%)	9 (2.94%)	3.954	1.004	Agree
10	110 (35.95%)	127 (41.50%)	40 (13.07%)	21 (6.86%)	8 (2.61%)	4.026	0.953	Agree
11	50 (16.34%)	105 (34.31%)	74 (24.18%)	56 (18.30%)	21 (6.86%)	3.361	1.304	Agree
12	117 (38.24%)	130 (42.48%)	37 (12.09%)	16 (5.23%)	6 (1.96%)	4.111	0.830	Agree
13	50 (16.34%)	97 (31.70%)	64 (20.92%)	70 (22.88%)	25 (8.17%)	3.262	1.438	Agree
14	61 (19.93%)	144 (47.06%)	76 (24.84%)	17 (5.56%)	8 (2.61%)	3.774	0.807	Agree
15	89 (29.08%)	121 (39.54%)	63 (20.59%	25 (8.17%)	8 (2.61%)	3.856	0.992	Agree
16	60 (19.61%)	124 (40.52%)	77 (25.16%)	35 (11.44%)	10 (3.27%)	3.630	1.017	Agree
17	58 (18.95%)	102 (33.33%)	77 (25.16%)	59 (19.28%)	10 (3.27%)	3.466	1.177	Undecided
18	119 (38.89%)	146 (47.71%)	26 (8.50%)	8 (2.61%)	7 (2.29%)	4.197	0.698	Agree
19	82 (26.80%)	142 (46.41%)	65 (21.24%)	11 (3.59%)	6 (1.96%)	3.938	0.749	Agree

Table 3: student's attitudes and beliefs of schizophrenia and bipolar disorder

No.	Strongly agree	Agree	Undecided	Disagree	Strongly disagree	Mean	Standard deviation	Degree
1	94 (30.72%)	132 (43.14%)	50 (16.34%)	23 (7.52%)	7 (2.29%)	3.938	0.927	Agree
2	43 (14.05%)	82 (26.80%)	84 (27.45%)	62 (20.26%)	35 (11.44%)	3.128	1.454	Undecided
3	43 (14.05%)	94 (30.72%)	94 (30.72%)	52 (16.99%)	23 (7.52%)	3.279	1.241	Undecided
4	37 (12.09%)	47 (15.36%)	79 (25.82%)	73 (23.86%)	70 (22.88%)	2.708	1.688	Undecided
5	54 (17.65%)	87 (28.43%)	97 (31.70%)	48 (15.69%)	20 (6.54%)	3.361	1.258	Undecided
6	32 (10.46%)	37 (12.09%)	40 (13.07%)	73 (23.86%)	124 (40.52%)	2.289	1.877	Disagree
7	54 (17.65%)	90 (29.41%)	73 (23.86%)	52 (16.99%)	37 (12.09%)	3.246	1.574	Undecided
8	57 (18.63%)	126 (41.18%)	89 (29.08%)	29 (9.48%)	5 (1.63%)	3.669	0.847	Agree
9	56 (18.30%)	95 (31.05%)	90 (29.41%)	44 (14.38%)	21 (6.86%)	3.407	1.275	Agree
10	64 (20.92%)	122 (39.87%)	84 (27.45%)	21 (6.86%)	15 (4.90%)	3.662	1.040	Agree
11	68 (22.22%)	140 (45.75%)	75 (24.51%)	12 (3.92%)	11 (3.59%)	3.803	0.862	Agree

DISCUSSION

The results found a high knowledge of the definitions, causes, symptoms and factors common to the two diseases. Three points had the slightest awareness. One personal weakness is one of the causes of schizophrenia and bipolar disorder, treatment of schizophrenia is done only in a mental hospital and disorganized speech is a symptom of schizophrenia. There was no significant finding of participants' awareness of genetic risk factors for bipolar disorder and schizophrenia. We found a high percentage of participants who believe that aggressive behaviour in schizophrenia patients and irregular behaviour in the work environment is a danger to society. Also, they believed that patients with bipolar disorder lack job opportunities. Few participants believe that people with bipolar disorder have difficulty forming social relationships. The participants did not mind dealing with schizophrenia and bipolar patients. We compared our study with several studies in the field. One was a schizophrenia study in the Al-Hasa region in Saudi Arabia [23]. They have unaware of the definition and symptoms of schizophrenia. In our study, we found that (40.85%) were aware of the definition and (32.68%) were aware of the symptoms; we believe the reason for that is (38.4%) of their participants have a high school level of education compared to ours were all of them are students in the medical field. Another study is a bipolar disorder in Saudi Arabia [24].

More than half of the participants in their study agreed that a weak personality is a cause of the bipolar disorder, compared to our results (16.34%) agreed on the same point. On the other hand, (31.8%) of their participants feel ashamed that someone in their family has bipolar disorder, but in our study, nearly half of the participants (40.52%) did not feel ashamed. This is because they are students in the medical field and they have sufficient knowledge to deal with these situations. In their study (39.3%) were not willing to marry someone previously diagnosed with bipolar disorder. In our study, the participants had reservations about marrying someone with bipolar disorder. The reason lies in the fact that most of their participants are married, with (52.2%); married couples have awareness, about the ways, approaches and methods to deal with people with schizophrenia, unlike our participants, as they are just students who have not reached the age of marriage. For the third study, we compared it with a schizophrenia study conducted in Greece [25] and their sociodemographic included urban, semi-urban and rural areas. The sample response is (1199) compared to our study, where all of them are students aged 18 to 23. They have poor knowledge and hold more negative beliefs. We have three questions to compare. The first question is people with schizophrenia taking to themselves agreed with (86.08%) compared to (32.68%) in our study. The second question is (30.72%) agreed that people with schizophrenia are more likely to have aggressive behaviour and be a threat to society compared to them where it was (75.06%). The third question (92.01%) did not mind marrying someone with schizophrenia, but in our study, participants were undecided because there are young and lacked experience.

CONCLUSIONS

Although knowledge and awareness regarding bipolar disorder and schizophrenia is high among students at the College of Public Health and Health Informatics. They also had the knowledge to differentiate between the two disorders from most aspects; however, the participants had reservations about beliefs and attitudes, as most of them were undecided and didn't express their opinions clearly. Although there is a huge scope for improving it.

While the participants had high knowledge, their attitudes and beliefs were unclear as a number of them were undecided on a number of questions. Therefore, we suggest that the researchers do more research in this field and that they focus on the common factors of the two disorders and the differences between them and on the attitudes and beliefs side.

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